

Applicant: Pekka Koivukunnas et al.  
Application No.: 10/069,203  
Art Unit: 1731

#### Remarks

Claims 7–8, 10–11, and 14–20 remain pending in the application. Claims 9, 12, and 13 have been canceled. In the Office Action dated September 9, 2003, claims 7–14 were again rejected under 35 USC 103(a) over the disclosures of *JP 5331793* in view of *Bubik et al.*

Claims 7, 10, and 14 have been amended and new claims 15–20 have been added. The claims now are directed to a papermaking machine in which a web having a moisture content of 50 to 80% is pressed against the Yankee dryer followed by a calender unit which brings the gloss surface which engaged the Yankee dryer surface into contact with a metal calendering surface in a shoe calender (Claims 7, 8, 10, 11, 14, 19, 20) or a belt technology calender (claims 15–18).

The *JP 5331793* reference requires a starting web having a moisture content of 30 to 45% and increases the Hunter gloss to at least 27% with a soft nip, whereas applicant's invention employs a web with a moisture content of 50 to 80% and improves Hunter gloss with a shoe calender or a belt technology calender immediately after the Yankee dryer.

As pointed out in *JP 5331793* (see machine translation [0006], [0007]) when moisture content is lowered gloss decreases. *JP 5331793* shows in *Comparative Examples 1 and 2* using 50% moisture content in the web only where no calender is used. A moisture content of 50% is needed to get good contact between the web and the yankee dryer. *JP 5331793* use a web moisture content of only 35–40% so as to need less drying on the yankee dryer, this allows a faster machine speed and results in much lower gloss which is treated by a soft calender. The reference suggests only using lower moisture webs 30 to 45% with a Yankee dryer followed by a soft calender. *JP 5331793* teaches (see abstract) "The control of the water content of the wet paper is performed by adopting a method comprising setting a pre-dryer in front of the Yankee dryer or method comprising strengthening the wire part or pressed part of the papermaking machine to enhance removal of the water content."

*JP 5331793* can be seen to teach, contrary to the amended claims, that the water content should be 30 to 45%. The references do not show a high water content web applied

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to a Yankee dryer followed by a shoe calender or a belt technology calender.

Applicant's invention is fundamentally different. Applicant starts with a higher moisture web which inherently produces a better gloss surface which is then further dried by the shoe calender or belt technology calender which improves gloss without substantially reducing bending resistance. The *JP 5331793* reference does not provide the same apparatus or method employed by applicant, it requires a web with a lower moisture content.

*Bubik et al.* merely teaches an extended nip (shoe) calendar but does not suggest combining the extended nip (shoe) calender immediately after a Yankee dryer nor have the claimed range of moisture content of a paper web for use with the Yankee and dryer belt technology or shoe combination. Applicant's disclosure cannot be used as a blueprint for constructing applicant's inventions. In the absence of a suggestion contained within the prior art to create applicant's combination, and an expectation of success contained within the prior art, a prima facie case of unpatentability is not made out.

Applicant believes that no new matter has been added by this amendment.

Applicant submits that the claims, as amended, are in condition for allowance.  
Favorable action thereon is respectfully solicited.

Respectfully submitted,



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